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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/823,513

Applicant(s)

CHANG ET AL.

Examiner

SATISH RAMPURIA

Art Unit

2191

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 9 and 20-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 and 20-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 06/18/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to amendment

1. This action is in response to the supplemental amendment filed on 10/09/2009.
2. The objection to claims 8 is withdrawn in view of Applicant's amendment.
3. Claims cancelled by the Applicants: 7, 10-19.
4. Claims amended by the Applicants: 1, 8, 20, 27, 33.
5. Claims 1-6, 8, 9, 20-51 are pending.

Response to Arguments

6. Applicant's arguments with respect to claims have been considered but are not persuasive.

In response to applicants argument's that

Accordingly, applicant submits that none of the cited references teaches or suggests the subject matter of claim 1, particularly a protected memory component that cannot be viewed or accessed by the user, even with user password authentication and authentication of an application launcher executable. Applicant submits, therefore, that claim 1 is patentably distinct from the cited references and requests that the rejection be withdrawn.

Amended independent claims 20 and 33 include features that are recited in claim 1 and are not described in the cited references, including a protected memory component that cannot be viewed or accessed by the user, even with user password authentication and authentication of an application launcher executable. Applicants request, therefore, that claims 1, 20, and 33, and their respective dependent claims, be allowed.

Examiner respectfully disagrees. The combination of Kouperchliak, Shmueli and Deng discloses the limitations as argued above. More particularly, Shmueli discloses the stored application is being accessed without user authentication that is stored in the key, see paragraph [0028] "The key 10 is preferably configured for

autorun capability... This configuration will allow a start-up application stored on the key 10 to start executing when the key 10 is plugged in to the USB port of the host 12... the software 20 will include Java applets, Active-X components, or the like capable of automatically running on the host 12 upon engaging the key 10 with the host 12"). Shmueli discloses autorun capability to run the application stored in the key (i.e., USB, see fig. 2) and does not require any user authentication because it's done automatically via autorun and thus, stored in a protected area of the key. As acknowledged by the office action that Kouperchliak and Shmueli does not explicitly disclose a protected memory component. Deng discloses the protection memory area which is protected from being modified or erased, see col.6, lines 54-65. Thus, the amalgamation of Kouperchliak, Shmueli and Deng discloses the limitations as claimed.

With respect to claim 27 applicants indicated that nothing in Kouperchliak that teaches of suggests a user operable switch on the integrated circuit memory device. Examiner respectfully disagrees. Kouperchliak explicitly teaches a switch to switching between the mass storage device emulator and the functional unit, see paragraph [0011] a functional unit and a switch for switching between the mass storage device emulator and the functional unit"; paragraph [0025] "the device being operable to be switched between a first mode of standard operation as a peripheral device and a second mode of operation which employs the mass storage device emulator"; paragraph [0036] "A function switch 36 is operable to switch between the functional module and the mass storage device emulator".

Information Disclosure Statement

7. An initialed and dated copy of Applicant's IDS form 1449 filed on 06/18/2009 is attached to the instant Office action.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 4-6, 8-9, and 20-40, 42-44, 46-48, 50, 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2003/0046447 to Kouperchliak et al. (hereinafter, Kouperchliak) in view of US Publication No. 2002/0145632 to Shmueli et al. (hereinafter, Shmueli) and further in view of US Patent No. 6,829,672 to Deng et al. (hereinafter, Deng).

Per claims 1 and 50:

Kouperchliak discloses:

a controller for controlling interaction between the integrated circuit flash drive memory device and the host computing device (paragraph [0006] "...functional devices connectable to a computer host via an interface,..."; paragraph [0018] "");

a memory component storing arbitrary application software operable on the host computing device (paragraph [0006] "...the computer host having a computer operating system comprising a mass storage device...");

application launcher software stored on the integrated circuit memory device (paragraph [0007] "a mass storage device emulator for automatic installation in a host computer") to run automatically on the host computing device upon activation of the integrated circuit memory device with the host computing device, the application launcher software running on the host computing device to install or to run the arbitrary application software on the host computing device (paragraph [0007] "the mass storage device emulator residing on the functional device and being operative in conjunction with an operating system having a mass storage device driver with an autoplay feature, the emulator activating the loading functionality of the mass storage device driver").

Kouperchliak does not explicitly disclose *whereby the arbitrary software in the memory component cannot be viewed or accessed by the user even with the user password and is only accessible to be run by the application launcher software upon authentication of the application launcher software.*

However, Shmueli discloses in an analogous computer system *whereby the arbitrary software in the memory component cannot be viewed or accessed by the user even with the user password and is only accessible to be run by the application launcher software upon authentication of the application launcher software* (paragraph [0028] "...The key 10 is preferably configured for autorun capability... This configuration

will allow a start-up application stored on the key 10 to start executing when the key 10 is plugged in to the USB port of the host 12... the software 20 will include Java applets, Active-X components, or the like capable of automatically running on the host 12 upon engaging the key 10 with the host 12") [Here Shmueli discloses autorun capability to run the application stored in the key (i.e., USB, see fig. 2) and does not require any user authentication because it's done automatically via autorun and thus, stored in a protected are of the key.]

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of *whereby the arbitrary software in the memory component cannot be viewed or accessed by the user even with the user password and is only accessible to be run by the application launcher software upon authentication of the application launcher software* as taught by Shmueli into the method of automatic software/driver installation of a stored within the device as taught by Kouperchliak. The modification would be obvious because of one of ordinary skill in the art would be motivated to securely store the software in a protected area to provide privacy and security issues associated with computing on multiple computing devices on commercial and personal levels as suggested by Shmueli (paragraph [0005]).

Neither Kouperchliak nor Shmueli explicitly disclose protected memory component.

However, Deng discloses in an analogous computer system protected memory component (col. 6, lines 54-65 "The write protection pin WP has hardware

write protection function, that is, it can physically protect the contents of the flash memory from being modified or erased. On the other hand, driver and firmware provide software write protection function for the external storage device. When the WP pin is at the write protection status (WP pin is connected to ground), the firmware notifies this status to the driver and the driver in turn notifies this status to the operating system").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having a protected memory component as taught by Deng in the method of automatic software/driver installation of a stored within the device as taught by the combination system of Kouperchliak and Shmueli. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a protected memory component to provide a way to safely store the data as suggested by Deng (col. 6, lines 63-65).

Per claim 2:

The rejection of claim 1 is incorporated and further, Kouperchliak discloses:

The integrated circuit flash drive memory device of claim 1 in which the application launcher software is embedded in the controller (paragraph [0022] "...a computer using an operating system having an automatic installation procedure...").

Per claims 4:

The rejection of claim 1 is incorporated and further, Kouperchliak does not explicitly disclose the integrated circuit flash drive memory device of claim 1 in which the application launcher software further runs the arbitrary software on the host computing device upon installing the arbitrary software.

However, Shmueli discloses in an analogous computer system the application launcher software further runs the arbitrary software on the host computing device upon installing the arbitrary software (paragraph [0007] "a portable device containing software capable of automatically executing on the host computing device in association with a computing session and provide an interface frame for display on the host computing device...").

The feature of the application launcher software further runs the arbitrary software on the host computing device upon installing the arbitrary software would be obvious for the reasons set forth in the rejection of claim 1.

Per claim 5:

The rejection of claim 1 is incorporated and further, Kouperchliak discloses:

The integrated circuit flash drive memory device of claim 1 further comprising a user operable manual switch that allows a user to select from among plural operating states that include a first state in which the application launcher software is operable and a second state in which the application launcher software is not operable so that the integrated circuit flash drive memory device functions as a conventional integrated circuit flash drive memory device (paragraph [0011] "a functional unit and a switch for

switching between the mass storage device emulator and the functional unit"; paragraph [0025] "the device being operable to be switched between a first mode of standard operation as a peripheral device and a second mode of operation which employs the mass storage device emulator").

Per claim 6:

The rejection of claim 5 is incorporated and further, Kouperchliak discloses:

The integrated circuit memory device of claim 5 in which the user operable manual switch allows a user to select from among more than two operating states (paragraph [0011] "a functional unit and a switch for switching between the mass storage device emulator and the functional unit"; paragraph [0025] "the device being operable to be switched between a first mode of standard operation as a peripheral device and a second mode of operation which employs the mass storage device emulator").

Per claim 8:

The rejection of claim 1 is incorporated and further, Kouperchliak discloses:

The integrated circuit flash drive memory device of claim 1 further comprising a connection that is connectable to a host computing device over Universal Serial Bus connection port (paragraph [0006] "devices connectable to a computer host ...load primary function software which performs the primary function from the USB device onto the computer host").

Per claim 9:

The rejection of claim 1 is incorporated and further, Kouperchliak discloses:

The integrated circuit flash drive memory device of claim 1 in which the controller and the memory component operate together as a storage device to the host computing device (paragraph [0007] "...the mass storage device emulator residing on the functional device and being operative in conjunction with an operating system having a mass storage device driver with an autoplay feature...").

Claim 20 and 44 is the computer products claim corresponding to computer product claims 1 and 3 and rejected under the same rational set forth in connection with the rejection of claims 1 and 3 above.

Claims 21-26 is the computer product claim corresponding to computer product claims 2-8 and rejected under the same rational set forth in connection with the rejection of claims 2-8 above.

Claim 27 and 46 is the computer products claim corresponding to computer product claims 1 and 5 and rejected under the same rational set forth in connection with the rejection of claims 1 and 5 above.

Claim 28-32 is the computer product claim corresponding to computer product claims 2, 3, 6, 8 and rejected under the same rational set forth in connection with the rejection of claims 2, 3, 6, 8 above.

Per claim 33:

a controller for controlling interaction between the integrated circuit device and the host computing device (paragraph [0006] "...functional devices connectable to a computer host via an interface,...");

a wireless component for enabling the host computing device wireless connectivity with the wireless component (paragraph [0006] "...the computer host having a computer operating system comprising a mass storage device...");

a memory component for storing wireless application software operable on the host computing device (paragraph [0006] "...the computer host having a computer operating system comprising a mass storage device..."; paragraph [0007] "a mass storage device emulator for automatic installation in a host computer").

Kouperchliak does not explicitly disclose autorun software stored on the integrated circuit wireless device that runs automatically on the host computing device upon activation of the integrated circuit wireless device with the host computing device, the autorun software, upon running on the host computing device, installing or running the wireless application software on the host computing device; wherein the memory component includes a memory component where the wireless application software is stored so as not to be viewable or accessible by the user, even with password authentication, and is accessible only by the autorun software for installation or running of the wireless application software.

However, Shmueli discloses in an analogous computer system *autorun software stored on the integrated circuit wireless device that runs automatically on*

the host computing device upon activation of the integrated circuit wireless device with the host computing device (paragraph [0007] "a portable device containing software capable of automatically executing on the host computing device in association with a computing session and provide an interface frame for display on the host computing device..."), *the autorun software, upon running on the host computing device* (paragraph [0028] "key 10 is preferably configured for autorun capability"), *installing or running the wireless application software on the host computing device* (paragraph [0028] "a start-up application stored on the key 10 to start executing when the key 10 is plugged in to the USB port of the host 12" paragraph [0033] "FIG. 2C depicts a wireless communication device 10C, such as a transponder, capable of facilitating wireless communications with the host 12"); wherein the memory component includes a memory component where the wireless application software is stored so as not to be viewable and is accessible by the user, even with password authentication, and is accessible only by the autorun software during installation or running of the wireless application software (paragraph [0028] "...The key 10 is preferably configured for autorun capability... This configuration will allow a start-up application stored on the key 10 to start executing when the key 10 is plugged in to the USB port of the host 12... the software 20 will include Java applets, Active-X components, or the like capable of automatically running on the host 12 upon engaging the key 10 with the host 12") [Here Shmueli discloses autorun capability to run the application stored in the key (i.e., USB, see fig. 2) and does not require any user

authentication because it's done automatically via autorun and thus, stored in a protected are of the key.]

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of autorun software stored on the integrated circuit wireless device to install and or to run the wireless application software on the host computing, device automatically upon activation of the integrated circuit wireless device with the host computing device; wherein the memory component includes a protected memory component where the wireless application software is stored so as not to be viewable and is accessible by the user, even with password authentication, only by the autorun software during installation or running of the wireless application software, thereby providing copy protection of the wireless application software, and the device is wireless device as taught by Shmuely into the method of automatic software/driver installation of a stored within the device as taught by Kouperchliak. The modification would be obvious because of one of ordinary skill in the art would be motivated to autorun software stored on the integrated circuit wireless device to install and or to run the wireless application software on the host computing, device automatically upon activation of the integrated circuit wireless device with the host computing device; wherein the memory component includes a protected memory component where the wireless application software is stored so as not to be viewable and is accessible by the user, even with password authentication, only by the autorun software during installation or running of the wireless application software, thereby

providing copy protection of the wireless application software to allow access and control of the mobile device as suggested by Shmueli ((paragraph [0005])).

Neither Kouperchliak nor Shmueli explicitly disclose protected memory component, providing copy protection of the wireless application software.

However, Deng discloses in an analogous computer system protected memory component, providing copy protection of the wireless application software (col. 6, lines 54-65 "The write protection pin WP has hardware write protection function, that is, it can physically protect the contents of the flash memory from being modified or erased. On the other hand, driver and firmware provide software write protection function for the external storage device. When the WP pin is at the write protection status (WP pin is connected to ground), the firmware notifies this status to the driver and the driver in turn notifies this status to the operating system").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having a protected memory component, providing copy protection of the wireless application software as taught by Deng in the method of automatic software/driver installation of a stored within the device as taught by the combination system of Kouperchliak and Shmueli. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a protected memory component to provide a way to safely store the data as suggested by Deng (col. 6, lines 63-65).

Per claim 34:

The rejection of claim 33 is incorporated and further, Kouperchliak discloses:

34. The integrated circuit wireless device of claim 33 in which the connection between the integrated circuit wireless device with the host computing device is a Universal Serial Bus connection and the controller is a Universal Serial Bus controller (paragraph [0006] "...load primary function software which performs the primary function from the USB device onto the computer host").

Per claim 35, 42, 43, and 48

The rejection of claim 33 and 20 is incorporated and further, Kouperchliak does not specifically disclose the wireless component is a short range wireless specification component.

However, Shmueli discloses in an analogous computer system the wireless component is a short range wireless specification component (paragraph [0033] "FIG. 2C depicts a wireless communication device 10C, such as a transponder, capable of facilitating wireless communications with the host 12. Whereas a physical connection with a key 10 may implement the Windows plug-and-play interface, a wireless device 10C may incorporate an automatic detection or sensing technology, such as the discovery process used by Bluetooth, which is well documented and available to those skilled in the art").

The feature of the wireless component is a short range wireless specification component would be obvious for the reasons set forth in the rejection of claim 33.

Per claim 36:

The rejection of claim 33 is incorporated and further, Kouperchliak does not explicitly disclose the wireless component is a Wireless Local Area Network component and the wireless application software stored in the memory component for installing and or running on the host computer is Wireless Local Area Network application software.

However, Shmueli discloses in an analogous computer system autorun the wireless component is a Wireless Local Area Network component and the wireless application software stored in the memory component for installing and or running on the host computer is a Wireless Local Area Network application software (Shmueli paragraph [0033] "...smart card 10B may be a contact-based or a contactless (wireless) smart card 10B capable of interacting with the host 12...FIG. 2C depicts a wireless communication device 10C, such as a transponder, capable of facilitating wireless communications with the host 12...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of autorun the wireless component is a Wireless Local Area Network component and the wireless application software stored in the memory component for installing and or running on the host computer is a Wireless Local Area Network application software as taught by Shmueli into the method of automatic software/driver installation of a stored within the

device as taught by Kouperchliak. The modification would be obvious because of one of ordinary skill in the art would be motivated to autorun the wireless component is a Wireless Local Area Network component and the wireless application software stored in the memory component for installing and or running on the host computer is a Wireless Local Area Network application Wireless Local Area Network to allow access and control of the mobile device as suggested by Shmueli (paragraph [0005]).

Per claim 37:

The rejection of claim 33 is incorporated and further, Kouperchliak discloses:

37. The integrated circuit wireless device of claim 33 further includes an external memory component and the integrated circuit wireless device operable as an external memory storage device and an external wireless device to the host computer (paragraph [0006] "...load primary function software which performs the primary function from the USB device onto the computer host").

Per claim 38:

The rejection of claim 1 is incorporated and further, Kouperchliak does not explicitly disclose the arbitrary software is a wireless software.

However, Shmueli discloses in an analogous computer system the arbitrary software is a wireless software (paragraph [0033] "FIG. 2C depicts a wireless communication device 10C, such as a transponder, capable of facilitating wireless communications with the host 12").

The feature of the arbitrary software is a wireless software would be obvious for the reasons set forth in the rejection of claim 1.

Per claim 39:

The rejection of claim 20 is incorporated and further, Kouperchliak discloses:

39 The integrated circuit memory device of claim 20 further comprising a USB hub for enabling interface with one or more functional components or devices (paragraph [0006] "...load primary function software which performs the primary function from the USB device onto the computer host").

Per claims 40, 47 and 51:

The rejection of claim 39 is incorporated and further, Kouperchliak does not explicitly disclose the USB hub includes one or more downstream ports for interfacing or connecting to one or more functional components or devices.

However, Shmueli discloses in an analogous computer system the USB hub includes one or more downstream ports for interfacing or connecting to one or more functional components or devices (paragraph [0033] "FIG. 2C depicts a wireless communication device 10C, such as a transponder, capable of facilitating wireless communications with the host 12. Whereas a physical connection with a key 10 may implement the Windows plug-and-play interface, a wireless device 10C may incorporate an automatic detection or sensing technology, such as the discovery process used by Bluetooth, which is well documented and available to those skilled in the art").

The feature of the USB hub includes one or more downstream ports for interfacing or connecting to one or more functional components or devices would be obvious for the reasons set forth in the rejection of claim 33.

10. Claims 3, 41, 45 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2003/0046447 to Kouperchliak, Shmueli, Deng in view of US Patent No. 7,237,046 to Paley et al. (hereinafter, Paley).

Per claims 3, 41, 45 and 49:

The rejection of claim 1, 20, and 33 is incorporated and further, neither Kouperchliak nor Shmueli nor Deng disclose including a public memory component that can be viewed or accessed by the user.

However, Paley discloses in an analogous computer system including a public memory component that can be viewed or accessed by the user (col. 2, lines 21-29).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having a public memory component that can be viewed or accessed by the user as taught by Paley into the combination system as taught by of Kouperchliak, Shmueli and Deng. The modification would be obvious because of one of ordinary skill in the art would be motivated to a public memory component that can be viewed or accessed by the user to provide a user to the device regardless of user privilege as suggested by Paley (col. 1, lines 49-60).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satish Rampuria whose telephone number is (571) 272-3732. The examiner can normally be reached on 8:30 am to 5:00 pm Monday to Friday except every other Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish Rampuria
Examiner, Art Unit 2191

/Anna Deng/

Primary Examiner, Art Unit 2191